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ABSTRACT

The drug use patterns of Indiana youth from the seventh to the twelfth grades in 1977 and 1980 were assessed. Findings reveal that: (1) There is an increase in the availability of marijuana at all grade levels; (2) The percentage of students who have tried most of the illegal drugs has increased, with the larger increase among the older students; (3) Students who use some of the illegal drugs appear to have started using them at an earlier age than did their 1977 counterparts; (4) Current younger students are starting their drug use at earlier ages than did the current older students; (5) The majority of students who have the chance to try drugs refuse to do so; (6) Fewer teenagers smoke cigarettes today than did in 1977; (7) The percentage of students who use alcohol has not changed significantly over the past three years; and (8) There is an increase in the amount of alcohol consumed at social occasions. (JD)

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ED198099

THE 1980 INDIANA SCHOOL DRUG STUDY

Executive Summary

1977-1980
Changes in Student Drug Use Patterns

Project Funded Under a Grant From:

Division of Addiction Services

Department of Mental Health

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November, 1980

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Introduction

This year a national study, American Families - 1980: An Indepth Survey and Analysis conducted by the Gallup Organization, identified alcohol and drug abuse as the two problems most "harmful" to family life in America today. Additionally, 93% of the survey sample stated that drug and alcohol education should be a part of every public school's curriculum. Long before the results of this national study were made public, Indiana has known that use and abuse of alcohol and illegal drugs among teenagers represents a serious problem to educators, parents, law enforcement officials, and to teens themselves. The Division of Addiction Services of the Indiana Department of Mental Health is committed to helping the community understand the nature and extent of teenage drug and alcohol use and abuse, and hopes that this report will serve as a catalyst to those individuals and organizations who wish to become directly involved in drug and alcohol abuse prevention in our state.

In the Spring of 1977, Dr. Herb Jones, Ball State University Professor in the Department of Physiology and Health Science, directed a study of drug and alcohol use and attitudes among junior and senior high school youth in Indiana. This study was coordinated by the Indiana Division of Addiction Services. A stratified (by Health Systems Agency) random sample of 30 school corporations was drawn and eighteen agreed to participate. Seventh, ninth and twelfth graders were surveyed in these corporations resulting in a total sample of 10,916 students.

In 1980, the Division of Addiction Services asked Dr. Jones and his colleague, Dr. Dale Hahn, to replicate the 1977 study in order to assess the changes, if any, in drug use patterns of Indiana youth which occurred over the three year period. In collaboration with Dr. Linda Morton Wakefield of the Division's staff, some changes were made in the survey instrument to improve its validity, while the intent of the questions was retained in order to insure comparability of these data from one year to the other. Seventeen of the original eighteen school corporations agreed to participate in the 1980 study. In the Spring of 1980, 11,277 students were surveyed. Seventh, ninth, tenth and twelftn graders were surveyed for the 1980 study so that changes over time among the same students could be assessed (example: 1977 7th graders versus 1980 10th graders), as well as changes over time among students at the same grade level (example: 1977 7th graders versus 1980 7th graders). Sample sizes for the two study years were as follows:

Grade Level	1977	1980
7	4,098	3,146
9	4,435	3,762
10	-	3,308
12	2,383	1,061
TOTAL	10,916	11,277

In both years, the survey samples were approximately 50% male, 50% female. In 1977, 91% of the students were white, while in 1980, the figure was 93%. (Note: An additional sample of large city schools was

surveyed in the 1980 study. Data from this sample will be analyzed in a sebsequent report.)

Validity of the Data

In anonymous, confidential survey research, one often speculates about the truthfulness of the subjects' responses. The investigators sought to assess the general validity of this research by two methods. First, a series of questions was asked about a "dummy" drug..(RTC)..one which does not exist. Second, the students were asked to report how honestly they answered the questions.

In the 1977 study, 4% of the students reported that they had used RTC. Only 3% of the 1980 sample reported RTC use. In 1977, 90% or more of the students reported that they answered most or all of the questions honestly, with the percentage increasing with the age of the respondent. In 1980, over 95% of the ninth, tenth and twelfth graders reported that they provided honest answers to all or most of the questions; for seventh graders, 90% answered honestly.

In addition to these indicators of general validity, the demographic characteristics of students in the two samples were compared. There were no major trend changes from 1977 to 1980 for the variables of sex, race, age, student living arrangement, varsity sport participation, role of religion in student's life or post-high school graduation plans.

While not absolute indicators of validity in the statistical sense, these indicators do provide evidence that a reasonably high degree of validity exists in these data.

1977 - 1980 DATA COMPARISONS

In the 1977 survey a series of questions was asked about each of eleven classes of drugs. In 1980, the same categories were used except that PCP was added. The drug classes were:

Marijuana	(Weed, Pot, Joints, Grass, Etc.)
LSD	(Acid, Trips, Etc.)
Hallucinogens	(Psilocybin, Mescaline, Peyote, Morning Glory Seeds, Etc.)
Amphetamines	(Dexadrine, Methedrine, Benzedrine, Pep Pills, Uppers, Bennies, Etc.)
Barbiturates	(Nembutal, Amytal, Seconal, Tuinal, Barbs, Downs, Goofballs, Yellow Jackets, Etc.)
Non-Barbiturates	(Methaqualone, Quaaludes, Soports, Doriden, Etc.)
Heroin	(Horse, H, Etc.)
Other Opiates	(Methadone, Codeine, Demoral, Dilaudid, Etc.)
Cocaine	(Coke, C, Cholly, Snort, Etc.)
Inhalants	(Gasoline, Ether, Glue, Amyl Nitrate, Snappers, Etc.)
PCP	(Angel Dust, Crystal T, Etc.)

While no exact statistical tests exist to measure the signifiance of any change from 1977 to 1980 (because the two samples were not completely independent, nor were they completely dependent), various estimates indicate that for most of the comparisons, a three percent change would be considered significant at the .05 level. Thus in the following tables, any change of three or more percentage points is considered significant.

Availability of Illegal Drugs

In both survey years, questions were asked, "Have you ever had the chance to try .....?". The data from these questions reveal a dramatic increase in availability of all the illegal drugs to the Indiana school-age population. Availability of marijuana is up roughly 23% since 1977, and availability of other illegal drugs is up 11% at the 7th grade level and up almost 17% at the high school level. Availability of marijuana and inhalants has increased the most at all grade levels. Among 9th and 10th graders the increase in the availability of amphetamines is equally high. Table 1 presents the percentage increase in availability of illegal drugs from 1977 to 1980. Figure 1 provides a graphic illustration of this increase and also demonstrates that drug availability is age-related; that is, that students in the higher grades have more access to illegal drugs than do students in the lower grades.

TABLE 1

Drug Availability

1980 Percentage Of Students Having An Opportunity To Try And Percentage Of Increase Since 1977

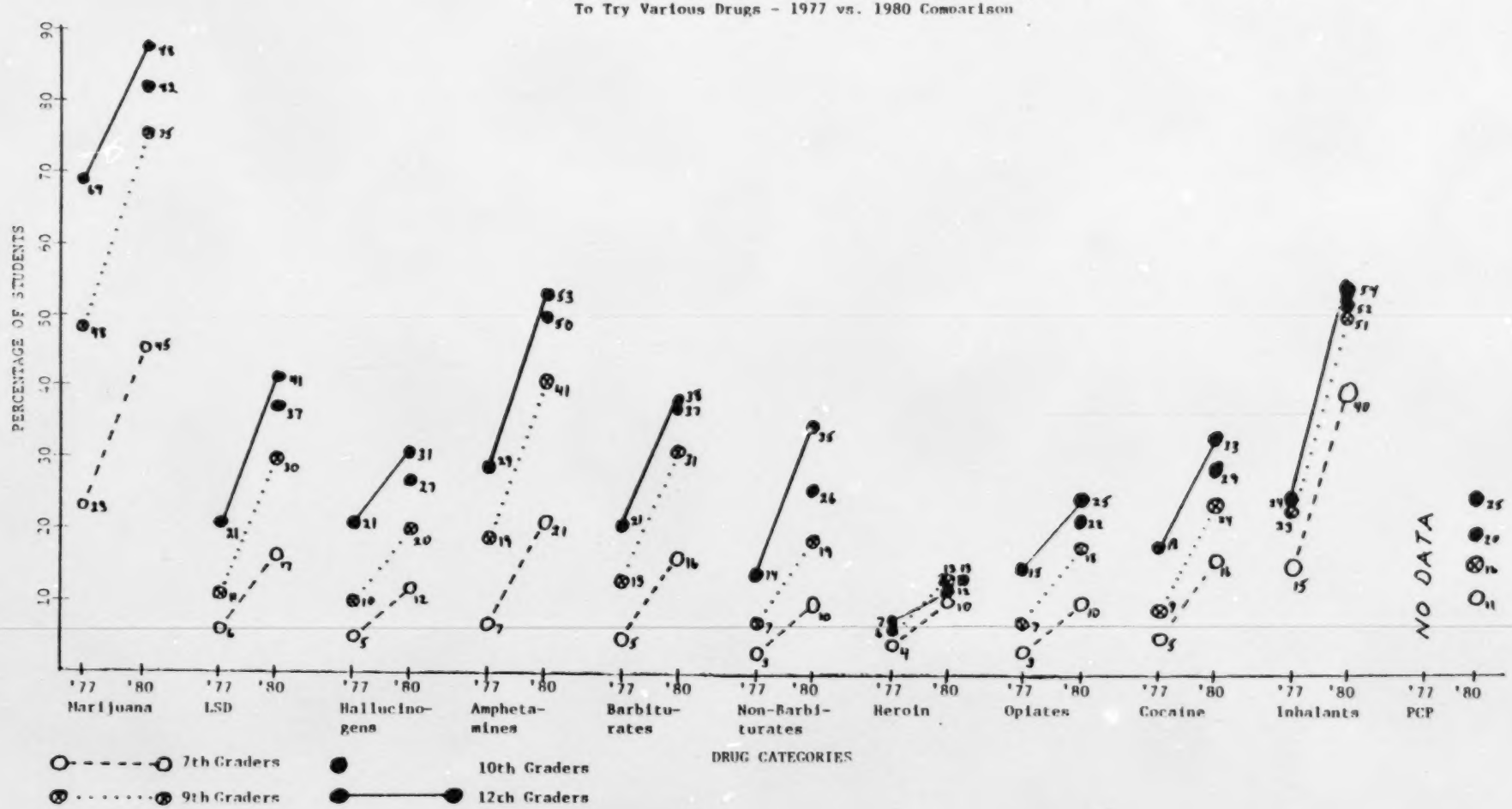
	Grade						
	7		9		10*	12	
Drug	1980	Incr.	1980	Incr.	1980	1980	Incr.
Marijuana	45%	22%	75%	27%	82%	88%	19%
LSD	17	11	30	19	37	41	20
Hallucinogens	12	7	20	10	27	31	10
Amphetamines	21	14	41	22	50	53	24
Barbiturates	16	11	31	18	37	38	17
Non-Barbiturates	10	7	19	12	26	35	21
Heroin	10	6	12	5	13	13	7
Other Opiates	10	7	18	11	22	25	10
Cocaine	16	11	24	15	29	33	15
Inhalants	40	25	51	28	52	54	30
PCP	11	-	16	-	20	25	-

- Data Not Collected In 1977
* 10th Grade Data Not Collected In 1977

FIGURE 1

AVAILABILITY OF ILLEGAL DRUGS

Percentage of Students Who Have Had the Opportunity
To Try Various Drugs - 1977 vs. 1980 Comparison



Use of Illegal Drugs

With the increased availability of illegal drugs to Indiana's school population, it is not surprising that use has also increased. The percentage of students who have tried most of the illegal drugs has increased around three to five percent with the larger increase among the older students. In all three grades experimentation with marijuana has increased the most; up 8% among 12th graders, up 7% among 9th graders and up 3% among 7th graders. Fully 63% of current 12th graders have tried marijuana.

Among 9th and 12th graders, amphetamine use has also increased as much as marijuana use has. Alarmingly, the third largest increase for all three grade levels is heroin. Five percent more 1980 9th and 12th graders have tried heroin than in 1977, and 4% more 7th graders have tried it.

Table 2 lists the percentages of students who have tried each of the illegal drugs and indicates the trends since 1977. There appears to be a signficiant decrease in hallucinogen use, but this may merely be a consequence of having listed PCP as a separate drug in the 1980 survey. Among 7th graders, use of non-barbiturate sedatives, opiates other than heroin, and PCP appears to be negligible. These drugs are more popular however among the older students.

Figure 2 graphically illustrates which drugs are on the increase (primarily marijuana, LSD, amphetamines, non-barbiturates and heroin) and which ones appear to have stabilized (barbiturates, other opitates and cocaine). Figure 2 also illustrates that increased experimentation with illegal drugs is age related as well as a factor of increased availability.

TABLE 2
Drug Use

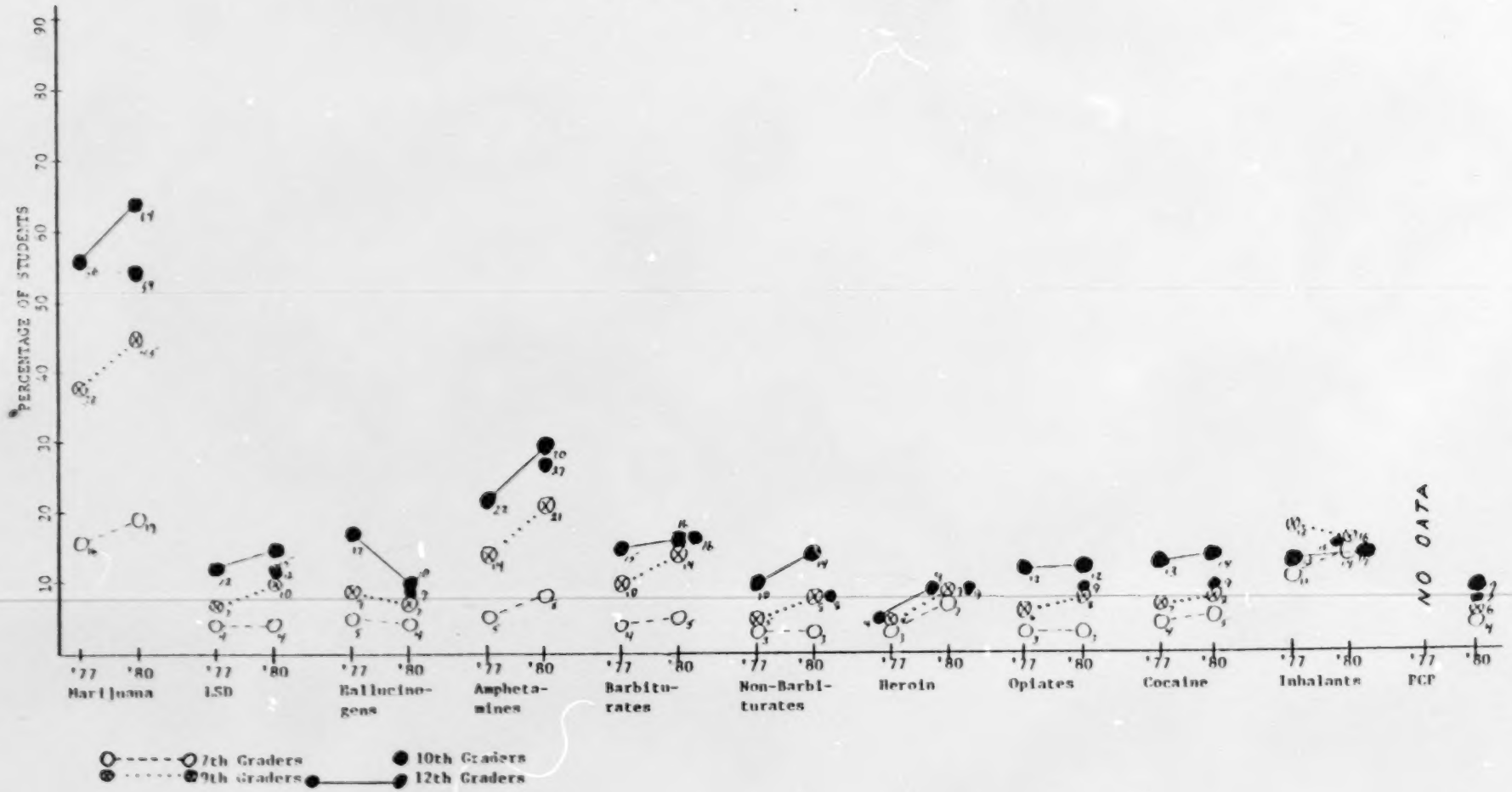
Percentage Of Students Who Have Tried Illegal Drugs
At Least Once And Trends Since 1977

	Grade						
	7		9		10**	12	
Drug	1980	Incr.	1980	Incr.	1980	1980	Incr.
Marijuana	19%	3%*	45%	7%*	54%	63%	8%*
LSD	4	0	10	3*	12	15	3*
Hallucinogens	3	-1	7	-2	9	10	-7*
Amphetamines	8	3*	21	7*	27	30	8*
Barbiturates	5	1	14	4*	16	16	1
Non-Barbiturates	3	0	7	3*	8	13	4*
Heroin	7	4*	9	5*	9	8	5*
Other Opiates	3	0	7	2	9	12	0
Cocaine	5	1	7	1	9	13	1
Inhalants	13	3*	16	-2	15	13	1
PCP	4	-	5	-	7	9	-

\- Data Not Collected In 1977
* Note: A change of 3% or more is considered significant at the .05 level.
** 10th Grade Data Not Collected In 1977

FIGURE 2

Percentage of Students Who Have Tried Each
Drug At Least Once - 1977 vs. 1980 Comparison



Not only are more students trying drugs now than were three years ago, but students who are using drugs are using them more frequently. Table 3 shows the percentage of students who indicated that they had used each of the drugs "only once or twice" and those who indicated they had used them "51 or more times". Percentage increase from 1977 is also shown in Table 3. Two trends are clear. For almost every drug at nearly all grade levels, fewer current students than 1977 students who use these drugs have used them only once or twice ("experimented"). The second trend is the converse of the first; that is, higher percentages of current users have used the drugs at greater frequencies (51 or more times) than 1977 students.

The data in Table 3 also show that with a few exceptions, one-third or more of the students who have used drugs appear to have used them only experimentally. The exceptions are marijuana (in the 9th, 10th and 12th grades), amphetamines (in the 10th and 12 grades), barbiturates (in all four grades) and non-barbiturates (in the 7th and 9th grades).

TABLE 3

1980 Percentage Of Drug Using Students Who Used Only Once Or Twice Versus Those Who Used Frequently And Percent Change Since 1977

		Experimental Users*		Frequent Users**	
Drug	Grade	1980 Percent	Percent Change	1980 Percent	Percent Change
Marijuana	7	33	- 4	18	+ 4
	9	24	- 3	34	+ 7
	10	16	-	40	-
	12	16	0	45	+ 1
LSD	7	38	- 5	7	+ 2
	9	39	- 8	5	- 1
	10	41	-	6	-
	12	33	-14	5	- 1
Hallucinogens	7	31	-11	10	+ 4
	9	30	-13	10	+ 5
	10	33	-	9	-
	12	40	- 1	7	- 1
Amphetamines	7	37	-12	11	+ 3
	9	30	- 7	14	+ 5
	10	24	-	16	-
	12	23	- 1	18	+ 5

* Used Only Once Or Twice
** Used 51 Or More Times

TABLE 3 - CONTINUED

Drug	Grade	Experimental Users* 1980 Percent	Experimental Users* Percent Change	Frequent Users** 1980 Percent	Frequent Users** Percent Change
Barbiturates	7	28	- 9	14	+ 6
	9	28	-10	10	+ 3
	10	26	-	10	-
	12	27	- 5	9	+ 1
Non-Barbiturates	7	22	-15	10	+ 2
	9	27	- 8	10	+ 4
	10	30	-	7	-
	12	34	6	9	+ 3
Heroin	7	31	-22	10	+ 4
	9	33	-13	13	+ 8
	10	32	-	9	-
	12	30	-21	6	- 4
Other Opiates	7	33	- 4	11	+ 2
	9	34	- 4	10	+ 4
	10	31	-	6	-
	12	30	- 3	9	+ 5
Cocaine	7	32	-17	10	- 1
	9	39	- 6	10	+ 5
	10	45	-	5	-
	12	45	2	6	+ 2
Inhalants	7	44	- 1	9	+ 2
	9	38	- 6	8	+ 1
	10	40	-	4	-
	12	23	-24	12	+ 8
PCP	7	37	-	11	-
	9	44	-	9	-
	10	41	-	9	-
	12	51	-	2	-

- Data not collected in 1977.

In both the 1977 and the 1980 studies, the data on age of first use were collected categorically rather than as actual ages. Thus average age of first use had to be estimated using the grouped, interval data method. Table 4 gives these figures. Even though the average ages reported in Table 4 are only estimates, comparisons between years and between grade levels are still valid since the same method was used to generate each estimate.

The data in Table 4 can be examined in three ways. First, 1977 students can be compared with their same grade counterparts in 1980, (Example: 1977 7th graders versus 1980 7th graders). Examining the

data in this fashion reveals that current students who use some of the illegal drugs appear to have started using these drugs at an earlier age than did their 1977 counterparts. Primarily marijuana, hallucinogens, barbiturates, heroin and other opiates show this trend toward overall lower age of first use.

Secondly, 1977 7th and 9th graders can be compared with themselves three years later (as 10th and 12th graders). This type of comparison confirms the previous conclusion that drug use is age related. Since more students begin to use drugs as they get older, the "average age of first use" increases reflecting the increased number of students who started using drugs between the grade in 1977 and the grade in 1980.

The third comparison which can be made from the data in Table 4 is that between each grade level separately for each year. This type of comparison most dramatically reveals that the current younger students are starting their drug use at earlier ages than did the current older students. For example, current high school seniors reported that they started using marijuana toward the end of their fourteenth year of age, while current 7th graders who use marijuana reported that they started when they were about eleven and one-half years old.

TABLE 4

Average Age Of First Use Of Illegal Drugs

Drug	Grade	1977	1980
Marijuana	7	11.8 years	11.4 years
	9	13.3	12.9
	10	-	13.7
	12	15.0	14.8
LSD	7	11.5	11.4
	9	12.6	12.9
	10	-	13.7
	12	14.3	14.6
Hallucinogens	7	11.5	11.2
	9	12.9	12.6
	10	-	13.2
	12	14.8	14.0
Amphetamines	7	11.8	11.7
	9	13.3	13.4
	10	-	14.1
	12	15.4	15.2
Barbiturates	7	11.7	11.6
	9	13.4	13.0
	10	-	13.8
	12	15.1	14.5

TABLE 4 - CONTINUED

Drug	Grade	1977	1980
Non-Barbiturates	7	11.6 years	11.6 years
	9	12.6	13.0
	10	-	13.7
	12	14.8	14.7
Heroin	7	11.7	11.8
	9	13.0	12.3
	10	-	12.5
	12	14.5	13.1
Other Opiates	7	11.5	11.3
	9	13.0	12.6
	10	-	13.3
	12	14.8	14.5
Cocaine	7	11.6	11.6
	9	13.1	13.0
	10	-	13.9
	12	15.4	15.1
Inhalants	7	11.3	11.2
	9	12.5	12.7
	10	-	13.3
	12	13.4	13.7
PCP	7	-	11.5
	9	-	12.7
	10	-	13.4
	12	-	14.2

- Data not collected in 1977.

Table 5 and Figure 3 present the decline in age of first use in yet another way....looking at the percentage of drug users in each grade level (in 1980) who started using drugs when they were only ten years of age or younger. Only heroin use seems to have leveled off with approximately 25% of the users having started at age ten or under. All of the other drugs show an increasing number of childhood beginners from current 12th graders down to 7th graders.

TABLE 5

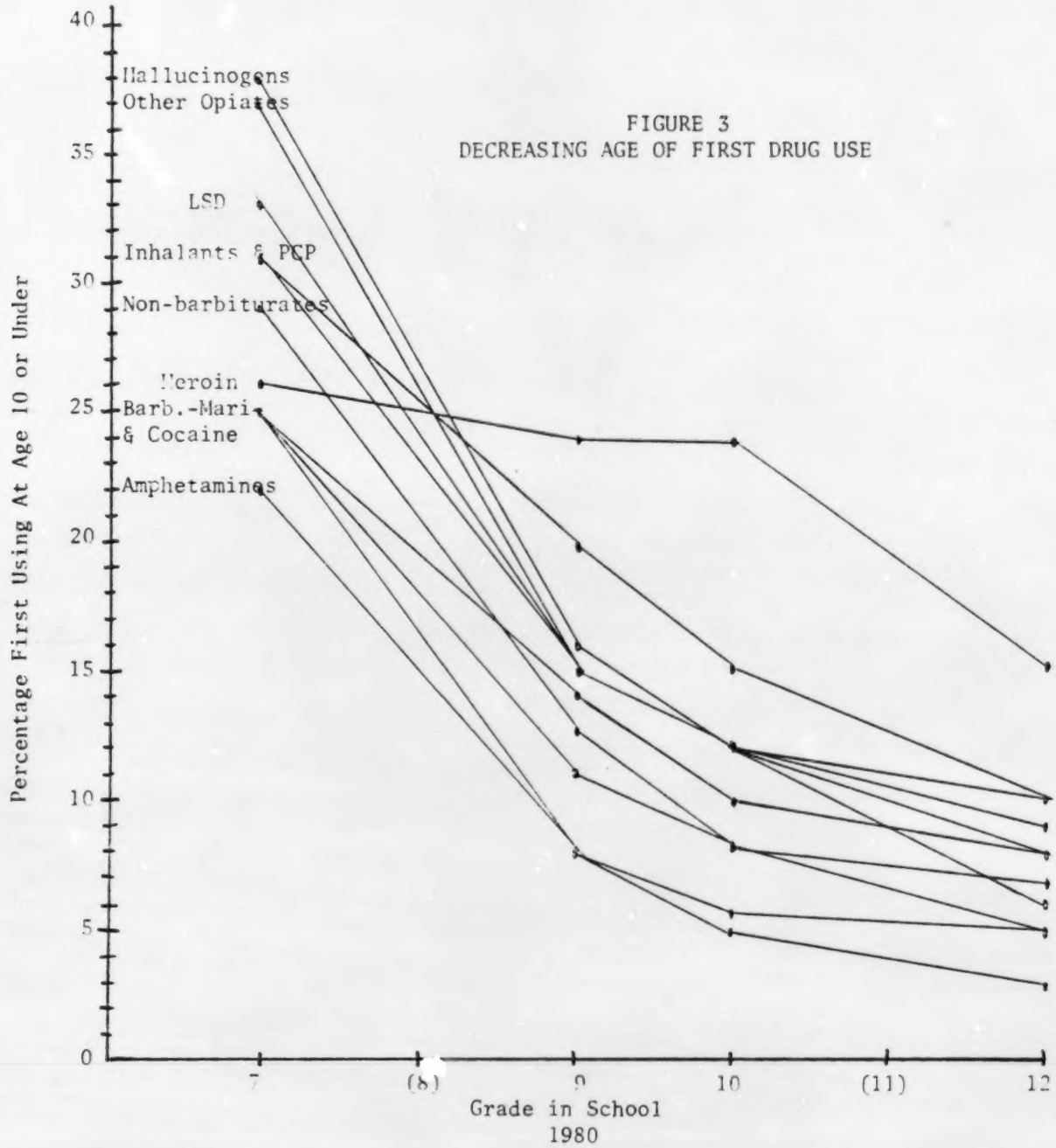
Decreasing Age of First Drug Use

Percentage Of Users Who Started Using The Drug At Age 10 Or Under
1980

Drug	Grade 7	9	10	12
Marijuana	25%	8%	5%	3%
LSD	33	15	12	9
Hallucinogens	38	16	12	8
Amphetamines	22	8	6	5
Barbiturates	25	11	8	5
Non-Barbiturates	29	13	8	7
Heroin	26	24	24	15
Other Opiates	37	16	12	6
Cocaine	25	14	10	8
Inhalants	31	20	15	10
PCP	31	15	12	10

Figure 3 shows a graphic illustration of the data in Table 5 - the dramatic decline in age of first use is evident when current 7th graders are compared with current students in higher grades. The pattern is similar for all of the drugs except heroin and inhalants. Since inhalant use is more prevalent in general among younger students it is not surprising that the decline is less severe for this drug. The data for heroin, though, present an entirely different picture. Over 7th, 9th and 10th grades, about one in four students who have ever used heroin used it for the first time when they were ten years of age of younger. Since the decline from only 15% for 12th graders, the percentage has remained stable at 25%.

FIGURE 3
DECREASING AGE OF FIRST DRUG USE



There is some encouraging news from this study. There are still some students who have the courage to refuse drugs. Table 6 presents the percentage of students who refused to try each of the drugs when given the opportunity.

For most drugs, the majority of students who have the chance to try the drug refuse to do so. The major exception to this is for heroin... fully two-thirds of the students who have an opportunity to try heroin go ahead and try it. Only among 7th graders is marijuana still refused by a slight majority of the students (58%). Amphetamines are now accepted by the majority of 10th and 12th graders who have a chance to try them, but the majority of the 7th and 9th graders still refuse.

TABLE 6

Students Who Had an Opportunity To Try Drugs But Didn't
(As A Percentage Of Those Having The Opportunity)

	Grade			
Drug	7	9	10	12
Marijuana	58%	40%	34%	28%
LSD	76	67	68	63
Hallucinogens	69	65	67	68
Amphetamines	62	51	46	43
Barbiturates	69	55	57	58
Non-Barbiturates	70	60	69	61
Heroin	36	31	31	31
Other Opiates	70	58	59	52
Cocaine	69	68	69	59
Inhalants	66	68	71	75
PCP	64	65	63	64

ALCOHOL AND CIGARETTE USE

Cigarettes

Fewer Indiana teenagers smoke cigarettes today than did in 1977. Smoking is more prevalent among older students than among the younger ones and older students who smoke, smoke more than do younger students who smoke. Across all grade levels, the percentage of students who smoke has dropped since 1977. Currently about 20% of 7th graders smoke, 25% of 9th and 10th graders, and 30% of 12th graders. However, among those students who do smoke, cigarette consumption has clearly increased since 1977. Whereas only 6% of the 1977 7th grade smokers used "one pack or more a day", 10% of the 1980 7th grade smokers indicated that they smoke this much. Ninth grade smokers increased from 8% to 13% at this level. Twelfth grade smokers at this level of use increased from 19% to 22%. Even more dramatic increases were seen in pack-a-day cigarette consumption in the same students over the three year interim between the studies.

TABLE 7

CIGARETTE SMOKING

Explanation	Grade	1977	1980
Percent Who Smoke	7	19	18
	9	30	25
	10	-	27
	12	30	29
Percent Of Smokers Who Smoke	7	6	10
One Or More Packs Per Day	9	8	13
	10	-	15
	12	19	11
Percent Of Smokers Who Started	7	33	31
At Age 10 Or Younger	9	22	22
	10	-	15
	12	14	10
Percent Of Smokers Who Openly	7	-	39
Buy Cigarettes In Drug Or	9	-	56
Grocery Stores	10	-	68
	12	-	72

- Data No Collected In 1977

Alcohol

Alcohol use has not changed significantly over the past three years for 7th and 12th grade students. However, 4% more 1980 9th grade students reported that they consume alcohol than did 1977 9th graders. Much larger increases were seen in alcohol use in the same students after three years. Thirty-seven percent more of the 1977 7th graders indicated that, as 10th graders, they now drink. This elevation was 10% for the 1977 9th graders - now 12th grade students. The data for alcohol use are presented in Table 8.

Overall, the number of students who report that they drink beer, wine and hard liquor respectively is about the same within each grade level (32% of 7th graders, 63% of 9th graders, 70% of 10th graders and 78% of 12th graders). However, when we look at the frequency and quantity data for the three types of beverages, it is clear that beer is the most popular choice of Indiana teenagers. Also, there appears to be a trend toward younger first use of beer, at least among 7th graders.

Most alarming though, is the finding that, of those students who drink beer, from 14% to 35% drink five or more beers at each occasion. Translating this into a figure which represents a percentage of all students (rather than the percentage of drinkers) reveals that fully 5% of all 7th graders, 16% of all 9th graders, 22% of all 10th graders, and 27% of all 12th graders are in the habit of drinking five or more beers whenever

they drink. Use of wine at these high levels is not too prevalent; however, the data for heavy use of hard liquor parallel those for beer. Of all 7th graders, 5% have five or more hard liquor drinks on each occasion; and 14% of all 9th graders, 16% of all 10th graders and 20% of all 12th graders drink five or more hard liquor drinks every time they drink.

Fully 20% of all high school seniors report that they have driven a car while high on alcohol over twenty times within the last year. Twenty percent also admit to driving as often while high on marijuana.

TABLE 8

ALCOHOL USE

Explanation	Grade	1977	1980
Percent Who Drink Any Alcoholic Beverage	7	32	31
	9	58	62
	10	-	69
	12	76	78
Percent Who Drink Beer	7	32	33
	9	57	63
	10	-	70
	12	76	78
Percent Who Drink Wine	7	32	33
	9	57	62
	10	-	70
	12	76	78
Percent Who Drink Hard Liquor	7	32	33
	9	57	62
	10	-	70
	12	76	78
Percent Of Drinkers Who Started Drinking Beer At Age 12 Or Under	7	92	85
	9	69	68
	10	-	58
	12	42	41
Percent Of Drinkers Who Started Drinking Wine At Age 12 Or Under	7	86	84
	9	64	61
	10	-	52
	12	36	34
Percent Of Drinkers Who Started Drinking Hard Liquor At Age 12 Or Under	7	82	80
	9	46	49
	10	-	36
	12	20	22

TABLE 8 - CONTINUED

Explanation	Grade	1977	1980
Percent Of Drinkers Who Drank Beer	7	7	6
9-24 Times In The Last Month	9	11	10
	10	-	15
	12	20	21
Percent Of Drinkers Who Drank Beer	7	4	3
25 Or More Times In The Last Month	9	3	3
	10	-	3
	12	3	5
Percent Of Drinkers Who Usually Have	7	-	6
5 Or 6 Beers Each Time They Drink It	9	-	12
	10	-	18
	12	-	18
Percent Of Drinkers Who Usually Have	7	-	8
7 Or More Beers Each Time They	9	-	14
Drink It	10	-	14
	12	-	17

- Data Not Collected In 1977